57-10-1. Plane coordinate systems designated -- Zones within the systems by county.

(1) The systems of plane coordinates that have been established by the National Ocean Service/National Geodetic Survey (formerly the United States Coast and Geodetic Survey) or its successors for defining and stating the geographic positions or locations of points on the surface of the earth within the state of Utah are known and designated as the Utah Coordinate System of 1927 and the Utah Coordinate System of 1983.

(2) For the purpose of the use of these systems, the state is divided into three zones: North, Central, and South Zones.

(a) The area now included in the following counties constitutes the North Zone: Box Elder, Cache, Daggett, Davis, Morgan, Rich, Summit, and Weber.

(b) The area now included in the following counties constitutes the Central Zone: Carbon, Duchesne, Emery, Grand, Juab, Millard, Salt Lake, Sanpete, Sevier, Tooele, Uintah, Utah, and Wasatch.

(c) The area now included in the following counties constitutes the South Zone: Beaver, Garfield, Iron, Kane, Piute, San Juan, Washington, and Wayne.

Repealed and Re-enacted by Chapter 60, 1988 General Session

57-10-2. Zones must be named in maps and documents.

(1) As established for use in the North Zone, the Utah Coordinate System of 1927 or the Utah Coordinate System of 1983 shall be named and designated as the "Utah Coordinate System 1927 North Zone" or "Utah Coordinate System 1983 North Zone" in any land description or on any map or document in which it is used.

(2) As established for use in the Central Zone, the Utah Coordinate System of 1927 or the Utah Coordinate System of 1983 shall be named and designated as the "Utah Coordinate System 1927 Central Zone" or "Utah Coordinate System 1983 Central Zone" in any land description or on any map or document in which it is used.

(3) As established for use in the South Zone, the Utah Coordinate System of 1927 or the Utah Coordinate System of 1983 shall be named and designated as the "Utah Coordinate System 1927 South Zone" or "Utah Coordinate System 1983 South Zone" in any land description or on any map or document in which it is used.

Repealed and Re-enacted by Chapter 60, 1988 General Session

57-10-3. North to South and East to West coordinate values.

The plane coordinate values for a point on the earth's surface used to express the geographic position or location or point in the appropriate zone of this system shall consist of two distances expressed in U.S. survey feet and decimals of a foot when using the Utah Coordinate System of 1927 and expressed in meters and decimals of a meter when using the Utah Coordinate System of 1983.

(1) One of these distances, known as the "x-coordinate" or "E-coordinate," shall give the position in an east-west direction; the other, known as the "y-coordinate" or "N-coordinate," shall give the position in a north-south direction.

(2) These coordinates shall be made to depend upon and conform to plane rectangular coordinate values computed on the systems defined in this chapter for the monumented points of the North American Horizontal Geodetic Control Network, as published by the National Ocean Service/National Geodetic Survey (formerly the United States Coast and Geodetic Survey) or its successors.

(3) Any such station may be used for establishing a survey connection to either Utah coordinate system.

Repealed and Re-enacted by Chapter 60, 1988 General Session

57-10-4. Legal effect of descriptions using coordinate values.

(1) A description of the location of any survey station or land boundary corner in the state is complete, legal, and satisfactory if it is expressed by use of the system of plane coordinates defined in this chapter.

(2) For purposes of sale or title transfer, no real property may be described solely by reference to coordinate values from the Utah coordinate system or any other coordinate system.

(3) When coordinates based on the Utah coordinate system are used in the description of any tract of land, they are supplemental to the basic description relating to existing recognized monuments and land lines of record.

(4) The description by reference to the subdivision, line, or corner of the United States public land surveys prevails over the description by coordinates, if there is any conflict between the descriptions.

Repealed and Re-enacted by Chapter 60, 1988 General Session

57-10-5. Descriptions of tracts extending over more than one zone.

(1) When any tract of land that is to be defined by a single land description extends from one into another of the coordinate zones, the positions of all points on its boundaries may be referred to by either of the two zones.

(2) The zone that is used shall be identified specifically in the land description.

Repealed and Re-enacted by Chapter 60, 1988 General Session

57-10-6. Utah Coordinate Systems of 1927 and 1983 defined.

For purposes of more precisely defining the Utah Coordinate Systems, the following special publications are adopted:

(1) For the Utah Coordinate System of 1927, the manual entitled "The State Coordinate Systems (A Manual for Surveyors)," Special Publication No. 235, and "Plane Coordinate Projection Tables for Utah," Special Publication No. 277. Both manuals are published by the U.S. Department of Commerce, Coast and Geodetic Survey, and provide, in part, the following:

(a) (i) The "Utah Coordinate System of 1927 North Zone" is a Lambert Conformal Conic Projection of the Clarke Spheroid of 1866 having standard parallels at north latitudes 41 degrees 47 minutes and 40 degrees 43 minutes, along which

parallels the scale shall be exact.

(ii) The origin of coordinates is at the intersection of the meridian 111 degrees 30 minutes west of Greenwich and the parallel 40 degrees 20 minutes north latitude.

(iii) This origin is given the coordinates: x=2,000,000 feet and y=0 feet.

(b) (i) The "Utah Coordinate System of 1927 Central Zone" is a Lambert Conformal Conic Projection of the Clarke Spheroid of 1866 having standard parallels at north latitudes 40 degrees 39 minutes and 39 degrees 01 minutes, along which parallels the scale shall be exact.

(ii) The origin of coordinates is at the intersection of the meridian 111 degrees 30 minutes west of Greenwich and the parallel 38 degrees 20 minutes north latitude.

(iii) This origin is given the coordinates: x=2,000,000 feet and y=0 feet.

(c) (i) The "Utah Coordinate System of 1927 South Zone" is a Lambert Conformal Conic Projection of the Clarke Spheroid of 1866 having standard parallels at north latitudes 38 degrees 21 minutes and 37 degrees 13 minutes, along which parallels the scale shall be exact.

(ii) The origin of coordinates is at the intersection of the meridian 111 degrees 30 minutes west of Greenwich and the parallel 36 degrees 40 minutes north latitude.

(iii) This origin is given the coordinates: x=2,000,000 feet and y=0 feet.

(2) For the Utah Coordinate System of 1983, the manual entitled "State Plan Coordinate System of 1983," NOAA Manual NOS NGS 5. The manual is published by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, and provides, in part, the following:

(a) (i) The "Utah Coordinate System of 1983 North Zone" is a Lambert Conformal Conic Projection of the North American Datum of 1983 having standard parallels at north latitudes 41 degrees 47 minutes and 40 degrees 43 minutes, along which parallels the scale shall be exact.

(ii) The origin of coordinates is at the intersection of the meridian 111 degrees 30 minutes west of Greenwich and the parallel 40 degrees 20 minutes north latitude.

(iii) This origin is given the coordinates: x or E=500,000 meters and y or N=1,000,000 meters.

(b) (i) The "Utah Coordinate System of 1983 Central Zone" is a Lambert Conformal Conic Projection of the North American Datum of 1983 having standard parallels at north latitudes 40 degrees 39 minutes and 39 degrees 01 minutes, along which parallels the scale shall be exact.

(ii) The origin of coordinates is at the intersection of the meridian 111 degrees 30 minutes west Greenwich and the parallel 38 degrees 20 minutes north latitude.

(iii) This origin is given the coordinates: x or E=500,000 meters and y or N=2,000,000 meters.

(c) (i) The "Utah Coordinate System of 1983 South Zone" is a Lambert Conformal Conic Projection of the North American Datum of 1983 having standard parallels at north latitudes 38 degrees 21 minutes and 37 degrees 13 minutes, along which parallels the scale shall be exact.

(ii) The origin of coordinates is at the intersection of the meridian 111 degrees 30 minutes west of Greenwich and the parallel 36 degrees 40 minutes north latitude.

(iii) This origin is given the coordinates: x or E=500,000 meters and y or

N=3,000,000 meters.

Amended by Chapter 62, 2001 General Session

57-10-7. Coordinates required to be based on control stations.

(1) Coordinates based on either the Utah Coordinate System of 1927 or the Utah Coordinate System of 1983 that purport to define the position of a point on a land boundary shall be based on a monumented horizontal control station established in conformity with the standards of accuracy and specifications for first or second order geodetic surveying, as prepared and published by the Federal Geodetic Control Committee (FGCC) of the United States Department of Commerce.

(a) Standards and specifications of the FGCC or its successor in force on the date of the survey shall apply.

(b) Publishing existing control stations, or the acceptance with intent to publish the newly established stations, by the National Ocean Service/National Geodetic Survey constitutes evidence of adherence to the FGCC specifications.

(2) Control stations which have been established by agencies of the state or its political subdivisions may also be used, provided those points are established in conformity with the standards set forth in Section 57-10-6.

Amended by Chapter 167, 1990 General Session

57-10-8. Use of terms on maps and documents.

(1) Any document identifying or using a coordinate system shall, in accordance with Section 57-10-9, clearly and completely identify the system used.

(a) The use of the term "Utah Coordinate System of 1927 (North, Central, South) Zone" on any map, report of survey, or other document shall be used to reference the system, the coordinates, and the unit of measure as defined in Subsection 57-10-6(1).

(b) The use of the term "Utah Coordinate System of 1983 (HARN 1994, or the current federal coordinate update used as the basis of the system being used) (North, Central, South) Zone" shall be used to reference the system, the coordinates, and the unit of measure as defined in Subsection 57-10-6(2).

(2) Anyone using a coordinate system similar to the Utah coordinate system, such as one where a modified elevation datum is used, shall clearly include "modified" in the title of the coordinate system.

(3) Any survey or map based on any such modified coordinate system shall show the title of the coordinate system, including "modified" in the title and show the appropriate combined adjustment factor relating the system to the Utah coordinate system.

Amended by Chapter 62, 2001 General Session

57-10-9. Use of coordinate system optional.

The use of the Utah coordinate system by any person, corporation, or

governmental agency engaged in land surveying or mapping, or both, is optional.

Amended by Chapter 62, 2001 General Session

57-10-11. 1983 system to be used after certain dates.

After January 1, 2002, any person, corporation, municipality, county, or state agency who is not utilizing an existing county coordinate system and is establishing a new countywide coordinate network for surveying or mapping, or both, must conform to the Utah Coordinate System of 1983, along with the current federal coordinate update.

Amended by Chapter 62, 2001 General Session